

MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members.

Surgery

Cancer: The Dangers of Oft-Repeated and Too Vigorous Examinations.—In spite of the earlier diagnosis of carcinoma and more improved methods in its excision, the operative treatment of cancer, moderately effective in the complete removal of small and early growths, still presents a discouraging outlook when the final results of all our efforts are reviewed. In our combat with this devastating disease several points need constant reiteration and reëmphasis.

It is dangerous to subject a patient with a probably malignant tumor to repeated examinations. It is fatal to squeeze or roughly handle a malignant tumor. Experimentally Tyzzer,¹ Knox,² and Wood³ have demonstrated a fact, many times noted clinically, that small malignant growths may be completely removed locally, but death occurs subsequently from widespread generalized carcinomatosis. In addition the important fact has also been demonstrated experimentally that gentle massage of the original tumor greatly increases the probability of such metastases. Mice have been inoculated subcutaneously with mouse carcinoma and mouse sarcoma, and the tumor allowed to grow to a small size, approximately 5 mm. in diameter. In half the animals (the other half being held as controls) massage of the tumor was instituted for very brief periods of thirty to sixty seconds on alternate days for one to two weeks, the total period of massage never exceeding from two to five minutes. The original tumor was then removed and the animals allowed to live for varying periods, when they were killed and a search made for pulmonary and other distant metastases. The corresponding control group was similarly treated, omitting only the massage. The number of metastatic emboli of malignant cells in the second unmassaged group totaled approximately half the number found in the first or massaged group. Apparently the manipulation and massage set free particles of tumor which formed emboli capable of producing metastatic tumors in the lungs and thence in other organs.

With these facts before us it is easy to understand the occasional appearance of a patient with an extraordinarily wide and rapid dissemination of a malignant tumor following misguided osteopathic or self-inflicted massage treatment.

It is most important for us as practitioners of medicine not to be party to an equally criminal procedure by subjecting a lump in the breast, a growth on the lip, or any of the accessible tumors, to vigorous palpation, which compresses, squeezes or roughly handles tissue possibly composed of malignant cells. Our examinations should be

brief, not repeated, painstakingly gentle, *by as few doctors as possible*, with a minimum amount of handling or displacement of the tumor. Any manipulation produces alternately compression and relaxation of the tissue, thereby acting as a pump in setting free lymphatic and vascular emboli. Students must be taught the inherent dangers of all examinations, and that tumors should not be squeezed between their finger tips, but palpated gently with the flat surface of the palm of the hand. The consistency and configuration of the tumor can easily be ascertained by this palpation without danger to the patient.

It is only through constant schooling that we can produce in ourselves that instinctive reaction to cancer whenever and wherever we meet it, which says, "Handle it gently and as little as possible." The eye alone frequently makes the diagnosis without the slightest need of palpation.

Embolic metastasis is a constant threat to a patient's life from the moment the tumor is first noticed. Such an embolus completely nullifies any and all procedures that are subsequently taken. Let us, as a profession, exercise the greatest care in not increasing the possibility of such emboli by thoughtless and by, oftentimes, unnecessarily vigorous manipulation of a possibly malignant growth.

Similarly, at the operating table, the operative handling of the tumor should be limited to the barest minimum, and the malignant tissue itself should always be gently handled. In the case of intra-abdominal tumors, generous incisions should be made to avoid unnecessary pulling and hauling of the growth. Extreme care must also be exercised to protect the sides of the wound against implantation metastasis which may develop as the result of direct contact with the surface of the malignant tumor.

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REFERENCES

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2. Knox, L. C.: The Relationship of Massage to Metastasis in Malignant Tumors, Ann. Surg., February, 1922, Vol. 76, p. 129.
3. Wood, F. C.: The Experimental Pathology of Cancer, J. A. M. A., January 3, 1925, Vol. 84, No. 1, p. 4.

Urology

The Changing Prostatic Mortality.—In the present day it is necessary for the surgeon to supplement technical skill with a knowledge of the type and progress of disease. Such knowledge leads to clinical acumen, good judgment, and

proper preparation of the patient. The low surgical mortality of today stands as a shining mark, indicating the care taken in the preoperative preparation of the patient handicapped by cardiac, renal, and metabolic diseases. A prostatic case is a good illustration of the need for an amply equipped surgeon who has diagnostic acumen, who is capable of preparing his patient to withstand the operation, and who has the technical skill to carry out a successful surgical procedure.

Prostatic surgery is not in the experimental stage. Experiences of the urologic surgeon have put the methods of preparation and operative procedure on a sound basis. The choice of the suprapubic or perineal operation is a personal one, depending, as a rule, on the one in which the operator is the most skilled, as there is little difference in the mortality rate in the hands of expert urologic surgeons.

Prostatectomy was formerly attended with a mortality rate that seemed too high for the magnitude of the operation. This rate has been constantly lowered as a result of a better understanding of renal function, improvements in anesthesia and in technique. Prostatectomy is never an emergency procedure. In the large majority of cases urethral catheter drainage is satisfactory; it relieves the emergency and allows sufficient time to make the necessary functional tests. The obstructing prostate can be removed after the patient has recovered from the effects of urinary retention and has been suitably prepared. Age *per se* is no contraindication to operation.

The marked difference in the mortality rate following operation by urologic surgeons and by general surgeons suggests that specialized care and long-continued preparation are of decided advantage to the patient. Deaver found 6.9 per cent mortality in a compiled series of 4654 cases of suprapubic prostatectomy. If all series of 100 cases or over were removed, thereby eliminating the work of most urologic surgeons, the mortality rises to between 20 and 30 per cent. Whiteside in 1905 noted a general mortality of 20 per cent. Ten years later he reviewed the work of thirty-four surgeons with data on 1432 cases. About one-half the surgeons contributed 820 cases. These men were experienced in the removal of the prostate; the mortality in their cases was less than 3 per cent. In the remaining cases the mortality was 26 per cent.

Pauchet, an experienced urologic surgeon who has done much to reduce the mortality of the operation, reported four series of 100 cases each. In the first 100 cases, ten patients died; eight died in the second series; six, in the third; and only four, in the fourth. Freyer, who has done over 1500 prostatectomies, states that his mortality diminished from 10 per cent in the first 100 cases to 3 per cent in the last 200.

Liebig reported a large series of cases which permits a contrast of mortalities not only in regard to the period in which the operation was done, but also the type of operation performed. The mortality for the single-stage suprapubic operation was 8.38 per cent in 2958 cases done

between 1912 and 1916. In 2379 cases operated on between 1917 and 1922 the mortality was 7.9 per cent. In the two-stage suprapubic operation the mortality was 10.2 per cent in the first period, and 4.3 per cent in the second.

The most recent large series of cases is that of Hunt, who reported a mortality of 5.4 per cent in 1000 cases operated during the last eight years. In 140 consecutive cases, after adequate preoperative treatment, there was only one death. The one-stage operation was performed in 72 per cent of Hunt's cases, and the Pilcher bag was used in 850 cases.

Perineal prostatectomy was successfully introduced into this country by Young in 1903, and his pupils have yielded some remarkable results in the mortality rate. Young has two series of cases, 166 and 198 consecutive cases, each without a fatality. Men trained by Young have reported mortality rates of less than 3 per cent. The operation has never gained popularity because of the skill in technique necessary for successful performance.

Regardless of the method used, prostatectomy has become a benign operation when proper care is given to diagnosis, preparation, preoperative and postoperative treatment.

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Bacteriology

Inherited "Scrofulous Diathesis."—In the pre-bacteriologic era of clinical medicine susceptibility to infectious diseases was usually referred to assumed inherited "physical types," "constitutions," or "diatheses." The conception of inherited "diatheses" was quite generally discarded with the development of bacteriology. That there is, however, an element of truth in these earlier hypotheses is indicated by recent studies from the department of animal pathology, Rockefeller Institute.

Lewis and Loomis¹ report that inbred guinea-pigs show distinct familial differences in their natural resistance to tuberculosis, which differences are roughly correlated with their inherited capacities to produce hemolysins and agglutinins, with their hereditary susceptibilities to anaphylactic reactions, and with the size and type of the local lesions produced by intracutaneous inoculation with inflammatory agents. The evidence thus far available leads these investigators to believe that these differences are "transmitted by the blending type of inheritance and are, therefore, controlled by multiple characters, . . . certain of which are apparently recessive in nature."

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